THE NEBRASKA STATE MUSEUM

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NOTES ON NEBRASKA FULGURITES

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Some six or eight years ago the writer contemplated a study of Nebraska fulgurites, both in the field and in the laboratory. In the meantime however, it proves to be superfluous for, after supplying Mr. A. E. Anderson, of the American Museum of Natural History, with certain material and data he proceeded in a masterful way on a technical inquiry, and it is with pleasure that, although delayed in publication, his findings follow in Bulletin 7 of the Nebraska State Museum. The present paper will deal as briefly as possible with the mode of occurrence and gross structure.

Fulgurites are often reported in Nebraska, and seem to be of fairly common occurrence, especially in well-known sandy areas. When winds blow the sand away, many fulgurites are exposed to view. However, the sandhills of the State have become so stabilized by grass roots and other vegetation, that blow-outs are rare, but when they do occur where the conditions for the formation of fulgurites were favorable, lightning tubes are reported to be numerous.

In the collections of the Nebraska State Museum, The University of Nebraska, are several good specimens and one notable one, collected by Mr. Oscar E. Hans, class of 1917, now a professional geologist and a close observer. Mr. Hans attributes the development of lightning tubes to an exact ratio of moisture in the sand. Hence, in certain seasons many lightning tubes seem to be formed, in others few or none. In digging out fulgurites Mr. Hans finds them branching and diverging along various lines, presumably in response to the moisture content. Thunder bolts travel downward through the sand in a tortuous yet vertical direction, but on reaching layers which are somewhat clayey and capable therefore of retaining a little more moisture, the bolt follows the damp layers, branching and re-branching. Fulgurites taper rapidly, branch more or less, and at ten or fifteen feet often end in flattened bubbles of glass, which seem to represent the